New Uses of Evacuated Floodplains

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Problem

While many recurrently damaged homes have been removed from the floodplain, there hasn’t been systematic follow-up to monitor the new land uses and what the relocation has meant to the environmental, social, and financial well-being, nor has a common method been developed to assess the value of new uses for future evacuations.

Acquisition Process

- Appraisal
- Title Search and Property Survey
- Negotiate Sale Price
- Closing
- Property Clearance and Management of New Use

Structure Removal Options

Relocation

Destruction

Salvage

FEMA GUIDELINES ON EVACUATED FLOODPLAINS

DON'T:

- ALTER NATURAL APPEARANCE
- IMPEDE FLOOD FLOW
- REDUCE ABILITY TO STORE WATER
- INCREASE DOWNSTREAM VELOCITY
- RESTRICT ACCESS IN AND OUT OF AREA

CONSTRAINTS ON CORPS FOR USE OF EVACUATED FLOODPLAINS

- NFIP Regulations
- Executive Order 11988
- Reluctance to Use Eminent Domain
- Limit on Recreation Benefits for Project Justification
- Local Interest in New Uses

Buy-Out Property Uses

- Farming/Gardening/Forestry/Botanical
- Undeveloped Recreation
- Developed/Active & Passive Recreation
- Stormwater Management/Retention/Buffer
- Wetland Bank
- Public-Non Recreational Use

Benefits of Floodplain Evacuation

- Reduction in External Costs (subsidies, emergency response, public damages)
- Flood Damage Reduction (only if shown not to be incorporated in the land value)
- Value of New Use of Evacuated Land
- Eliminates Residual Risk for Developed Uses

Justification Requires Significant Value to New Use of Evacuated Floodplain

Before a flood

During flood

After land was bought

Problems with Economic Evaluation

- How do we make a valid estimate of with and without conditions?
- How do we value outputs in consistent terms so that the tradeoffs are apparent?
- What are the environmental services provided by the new uses?
- Do we need to establish monetary values for the outputs?
- Which costs are NED?

Sources of Environmental Assessment Background

- **Environmental Benefit Fact Sheets**
- **Environmental Valuation Reference Inventory**
- **Beneficial Use Values Database**
- **Canadian and Australian Sources**

Valuation Methods

- ***Market Valuation***
- ***Contingent Valuation Methods***
- ***Conjoint Analysis***
- ***Damage Function Approach***
- ***Hedonic Methods***
- ***Optimization Models***
- ***Opportunity Cost Method***
- ***Simulation Models***
- ***Travel Cost Methods***

Economic Value of Environmental Services Fact Sheet

Study/Project Title:

- **Location:**
- **Study/Project Type (GI, CA, PAS, O&M)**
- **Status**
- **Summary Description**
- **Environmental Outputs**
- **Evaluation of Benefits:**
- **Source of Information and Date Provided**

Project - *Johnson Creek*

District - Ft. Worth

Location - Arlington, Texa

Authority

- General Investigation

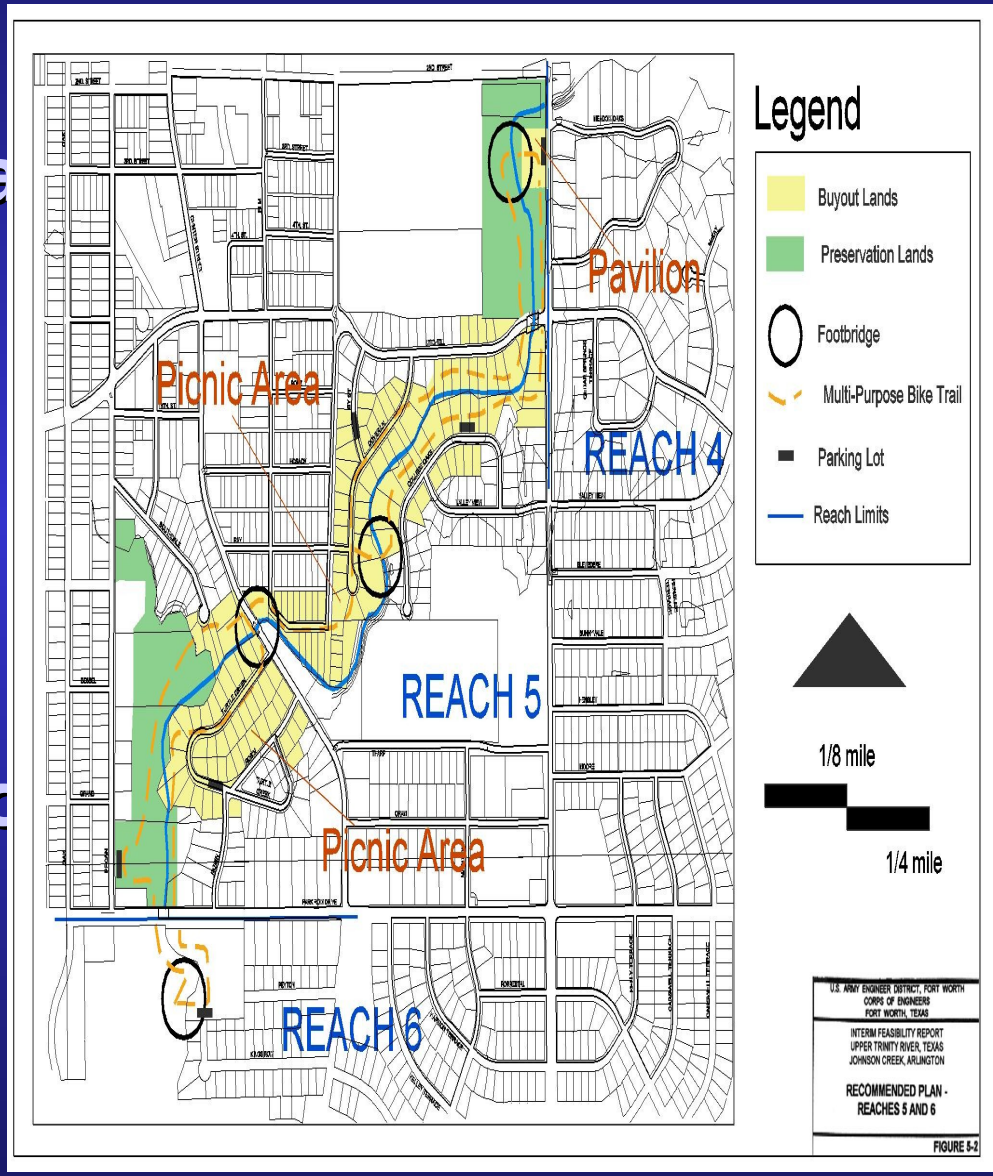
Non-Structural Measures

- Acquisition

Justification

- Flood Damage Reduc
- Recreation

BCR - 1.6



Project – ***Little Duck Creek***

District - Louisville

Location – Cincinnati, Ohio

Authority – Section 205

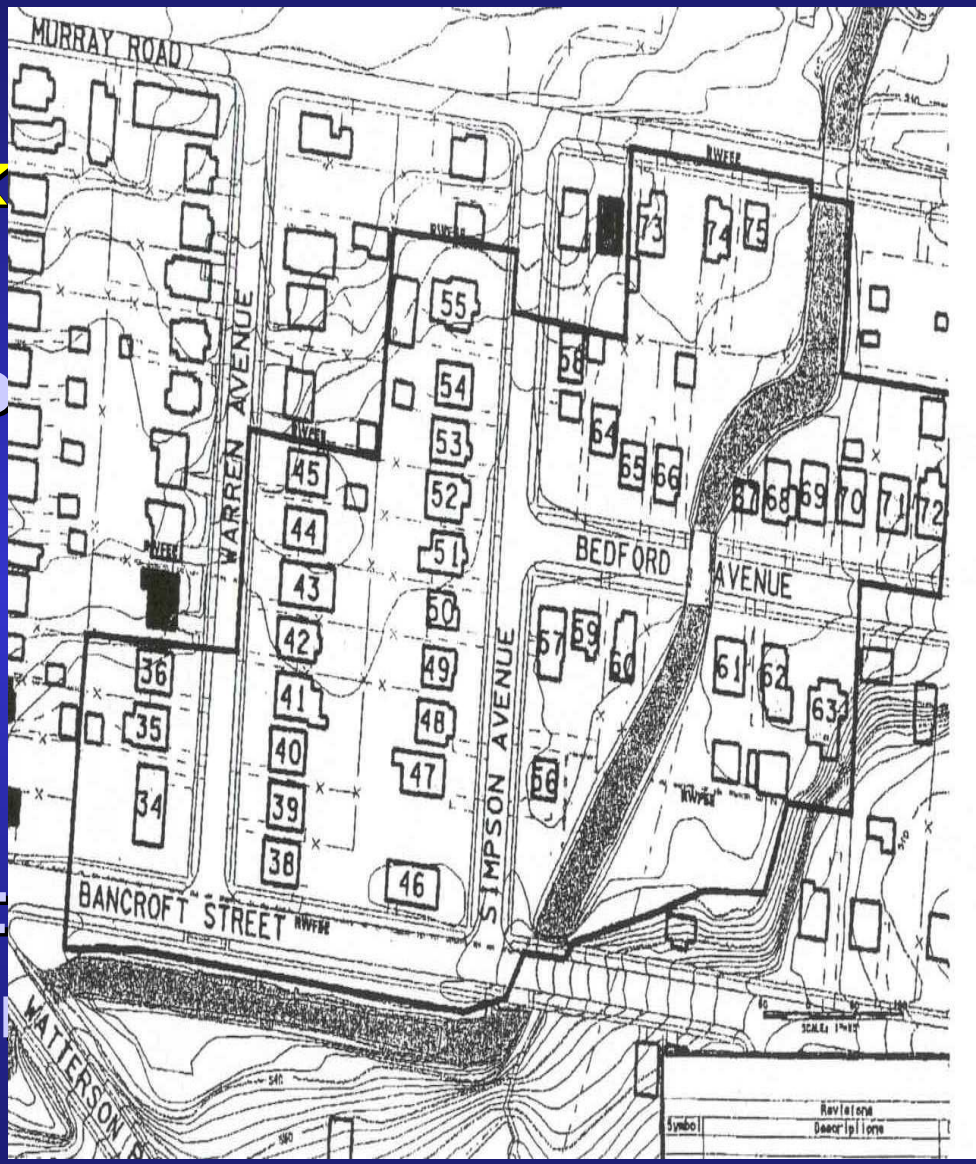
Non-Structural Measures

- Acquisition

Justification

- Flood Damage Reduct
- Ecosystem Restoratio

BCR – 1.4



Project - ***Cold Brook***

District - Omaha

Location - Hot Springs,
South Dakota

Authority - Section 205

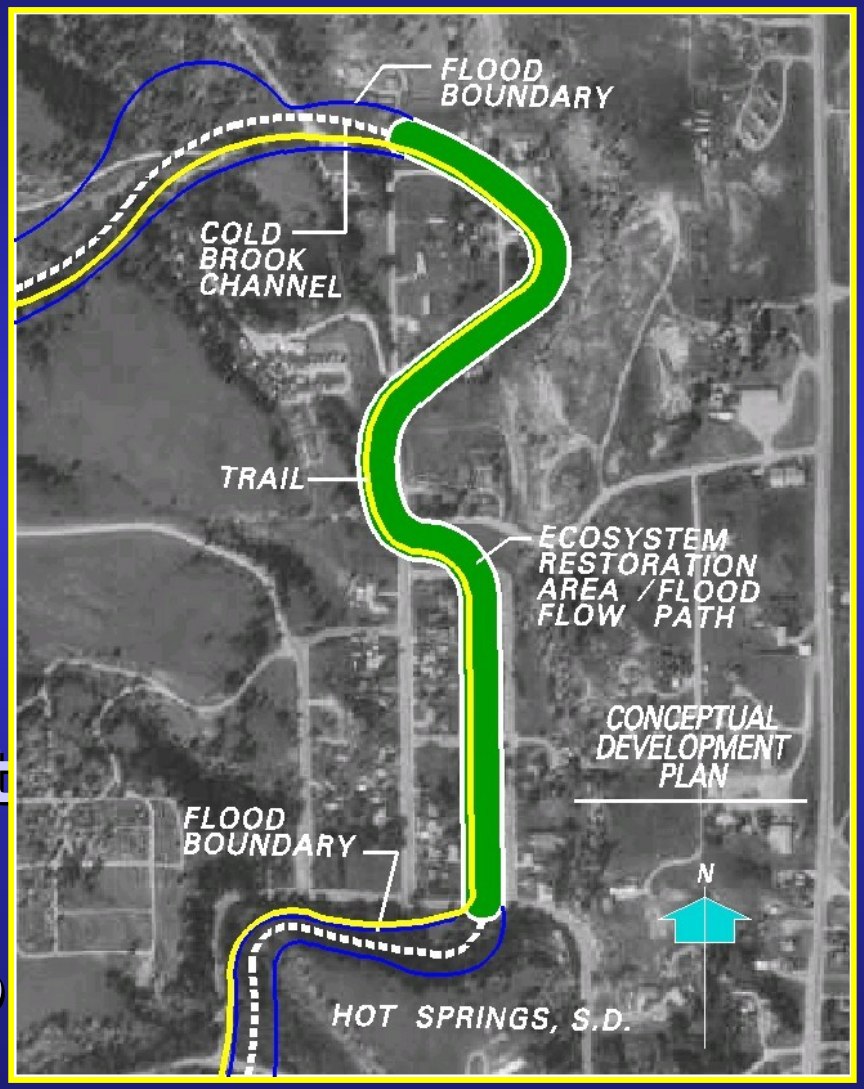
Non-Structural Measures

- Acquisition

Justification

- Flood Damage Reduct
- Recreation
- Ecosystem Restoratio

BCR - 1.8



Project - ***Yellowstone River***

District - Omaha

Location - Glendive, Montar

Authority - General Investig

Non-Structural Measures

- Relocation
- Acquisition

Justification

- Flood Damage Reductio
- Recreation
- Ecosystem Restoration

BCR - 1.4